



US00867773B2

(12) **United States Patent**
Lee et al.

(10) **Patent No.:** **US 8,677,773 B2**
(45) **Date of Patent:** **Mar. 25, 2014**

(54) **REFRIGERATOR HAVING A VARIABLE CAPACITY HEATER**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 588 days.

(21) Appl. No.: **12/690,130**

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(22) Filed: **Jan. 20, 2010**

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(65) **Prior Publication Data**

US 2010/0192608 A1 Aug. 5, 2010

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(30) **Foreign Application Priority Data**

Jan. 30, 2009 (KR) 10-2009-0007748

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(51) **Int. Cl.**

F25D 21/06 (2006.01)

F25D 25/00 (2006.01)

A47F 3/04 (2006.01)

(57)

ABSTRACT

(52) **U.S. Cl.**

USPC **62/275**; 62/248; 62/377; 62/331

(58) **Field of Classification Search**

USPC 62/275, 331, 3.1–3.2, 248, 377

See application file for complete search history.

Disclosed is a refrigerator that includes a main body having a cooling chamber. The refrigerator also includes a door coupled to the main body and configured to open and close the cooling chamber. The refrigerator further includes a home bar positioned at a front surface of the door and configured to provide access to contents of the refrigerator without opening the door. In addition, the refrigerator includes a heater positioned at the home bar and configured to adjust an amount of heat based on an ambient temperature.

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17 Claims, 7 Drawing Sheets

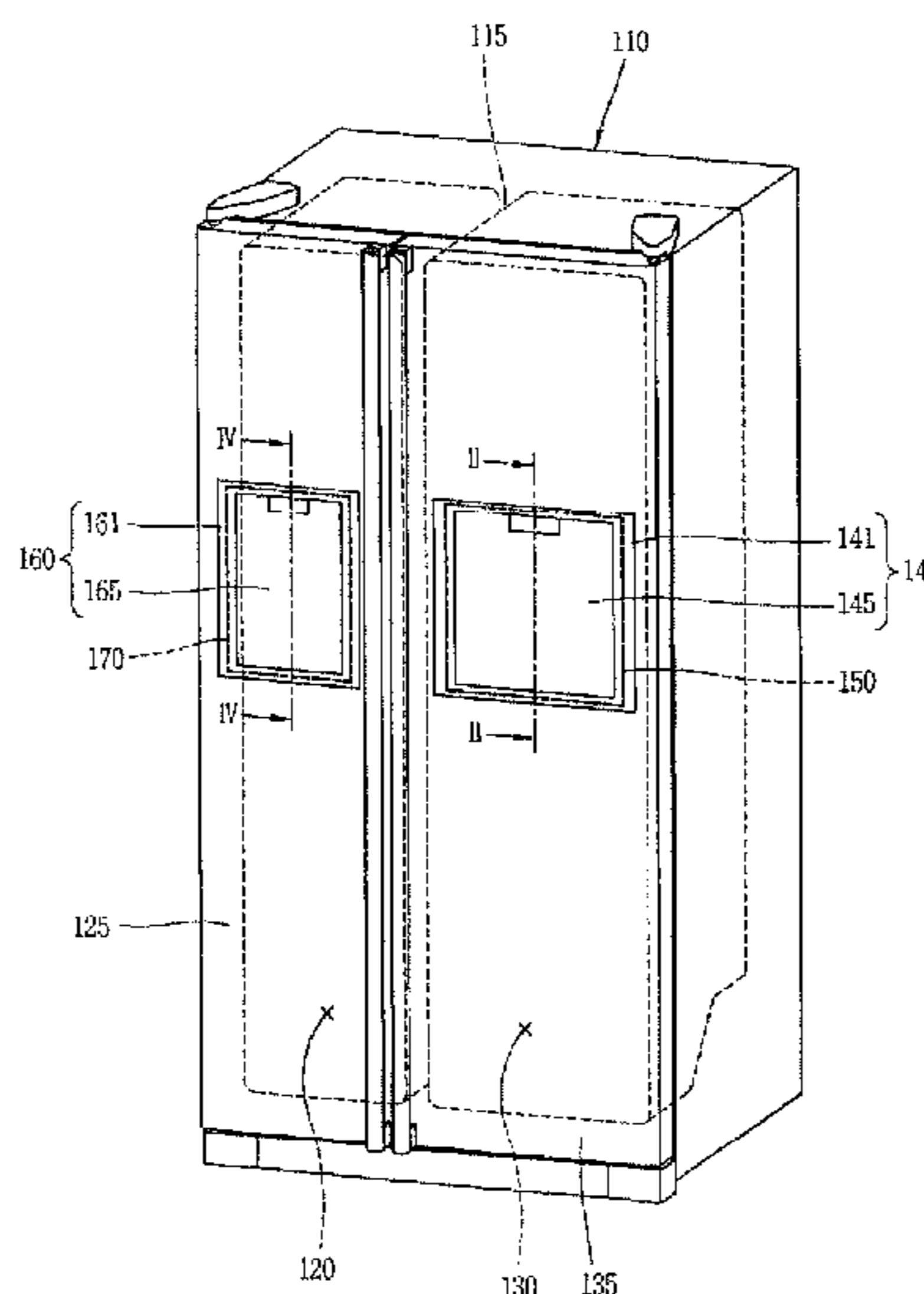


FIG. 1

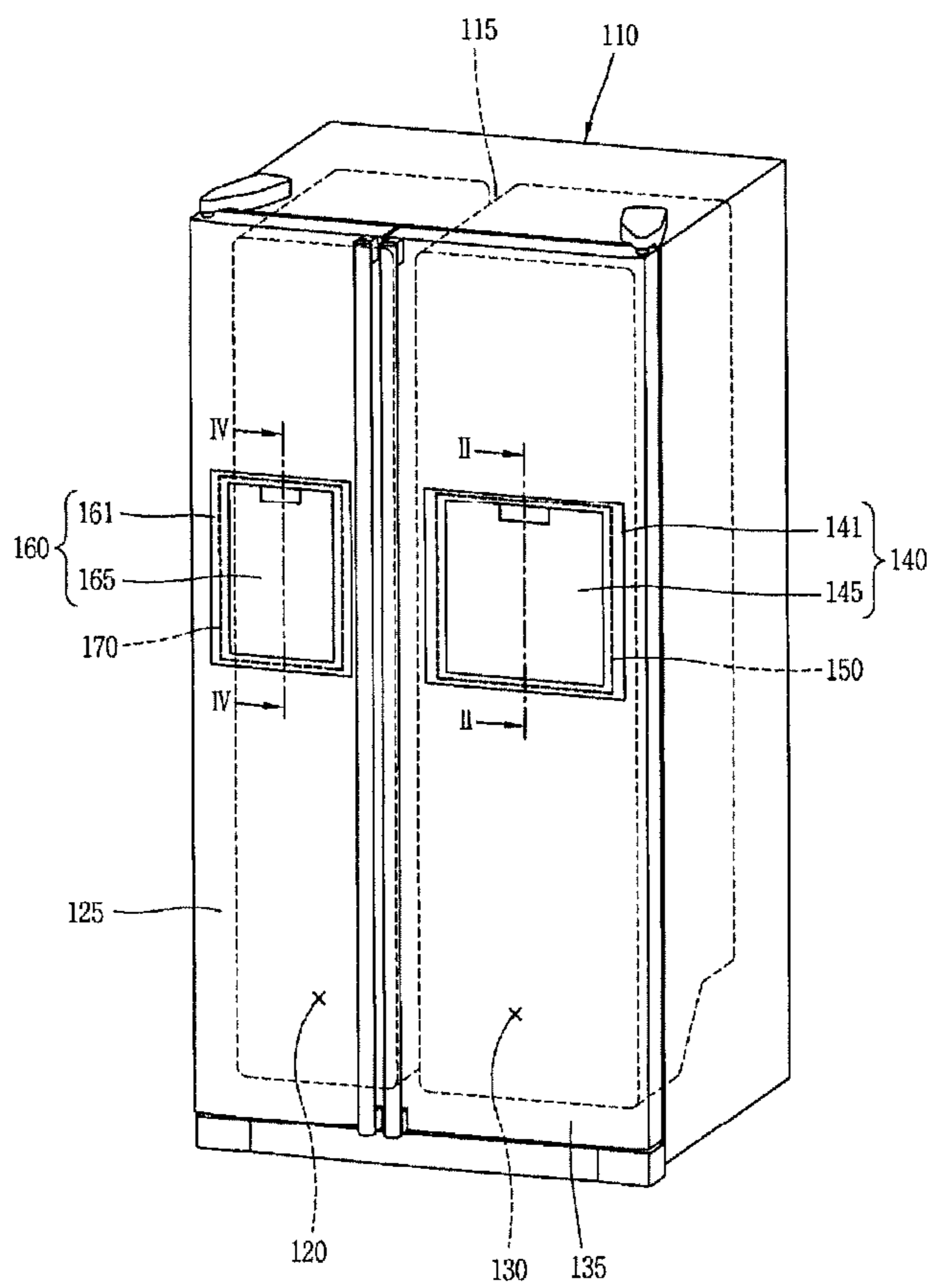


FIG. 2

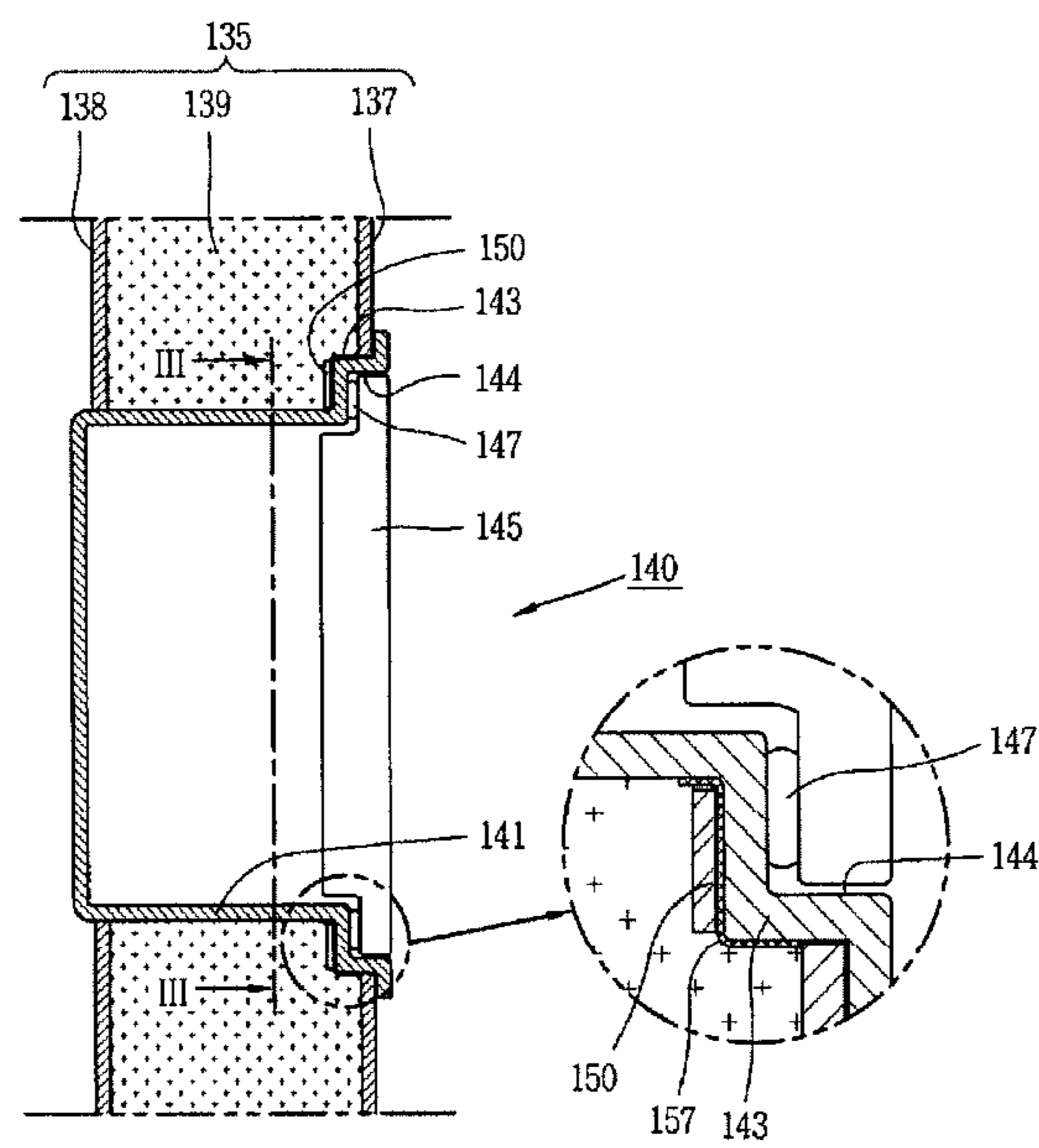


FIG. 3

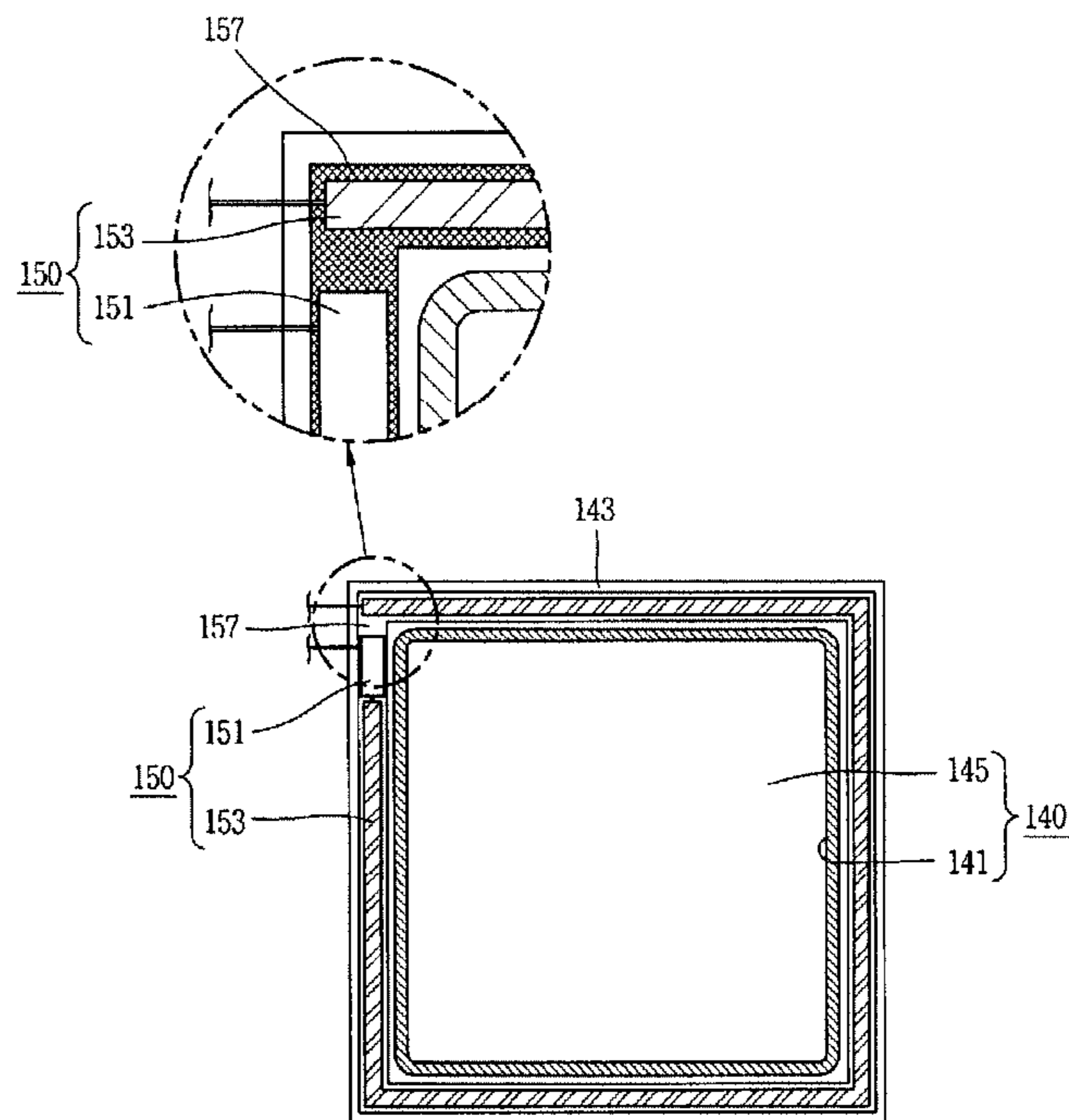


FIG. 4

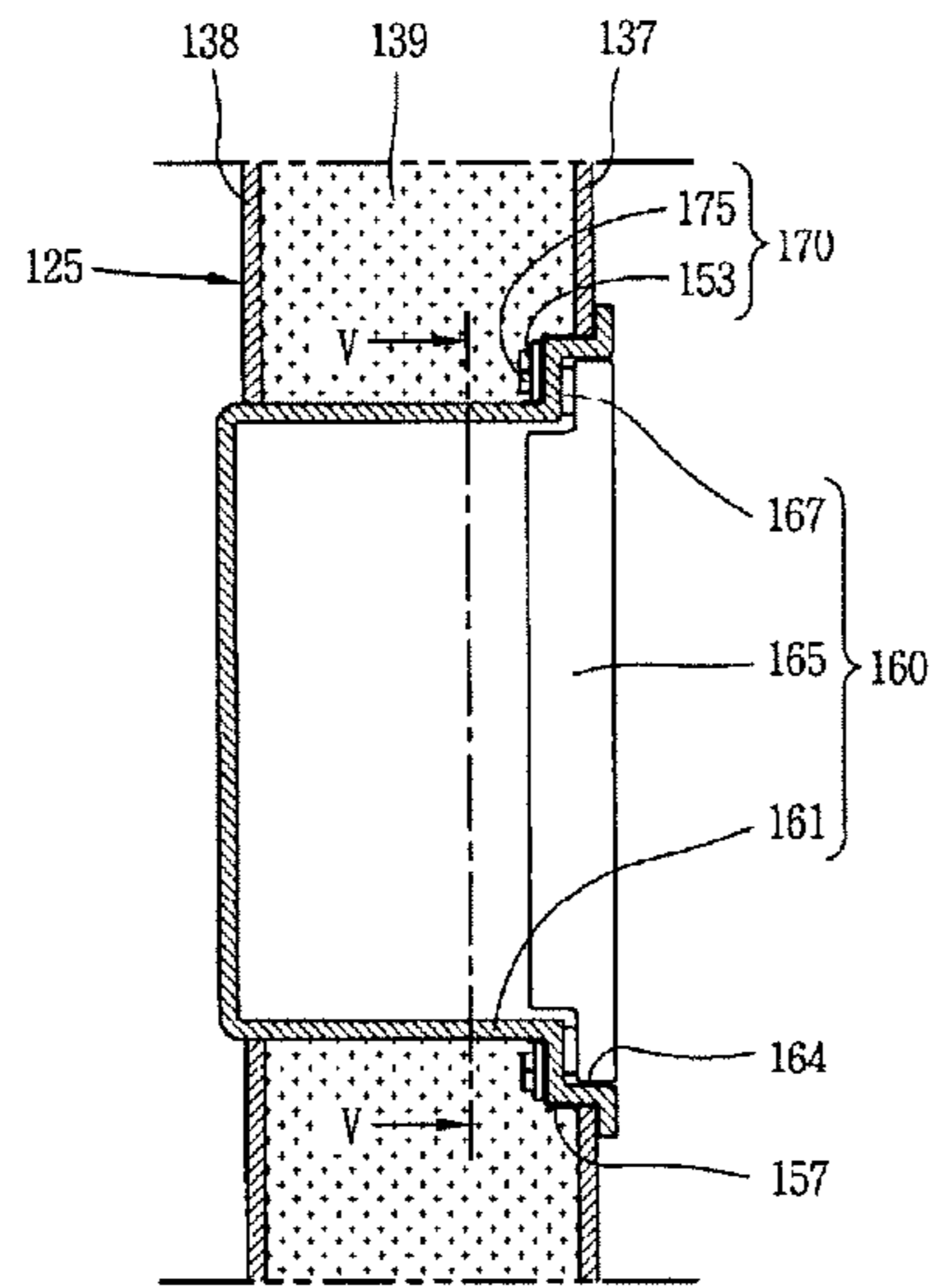


FIG. 5

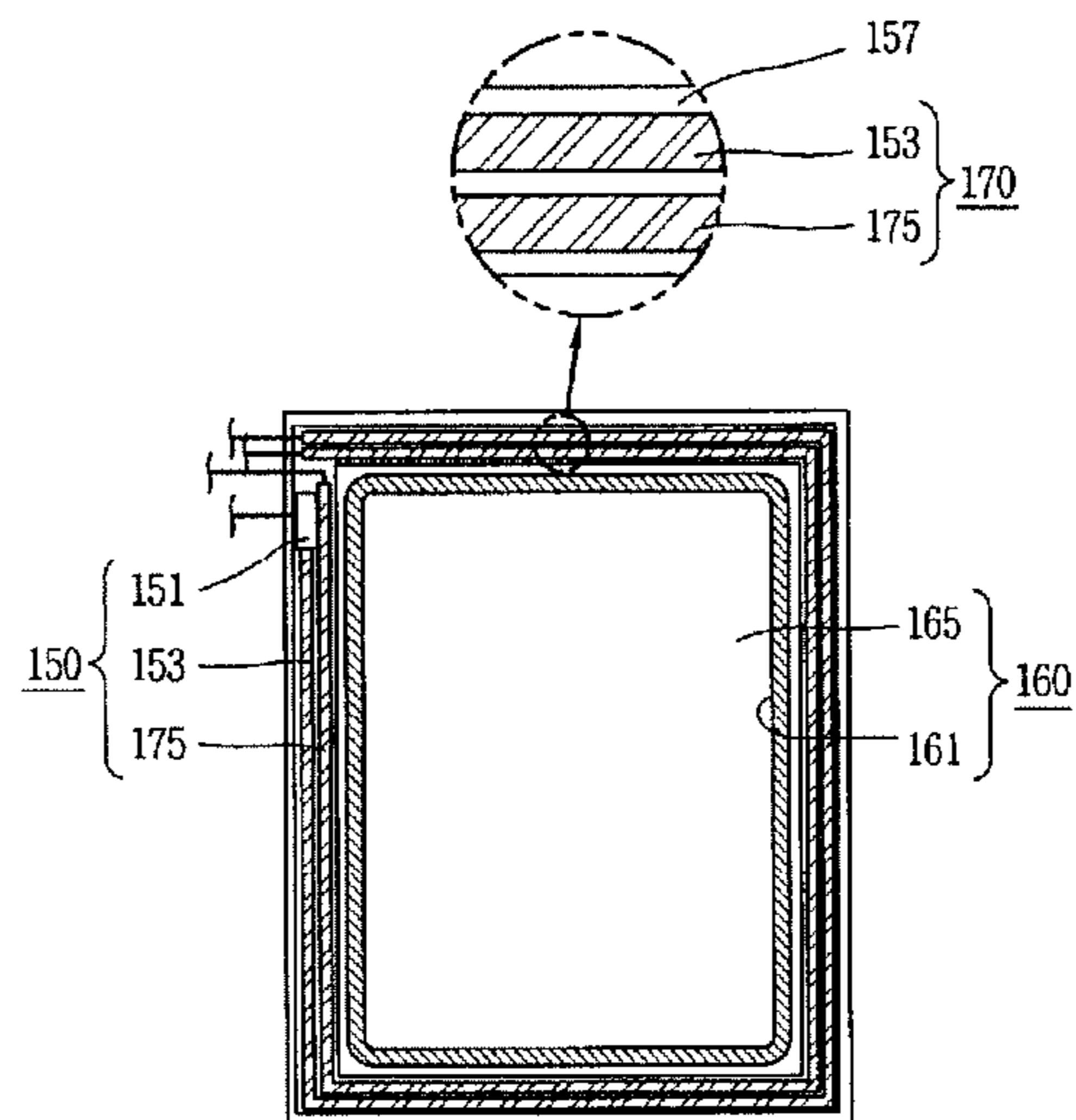


FIG. 6

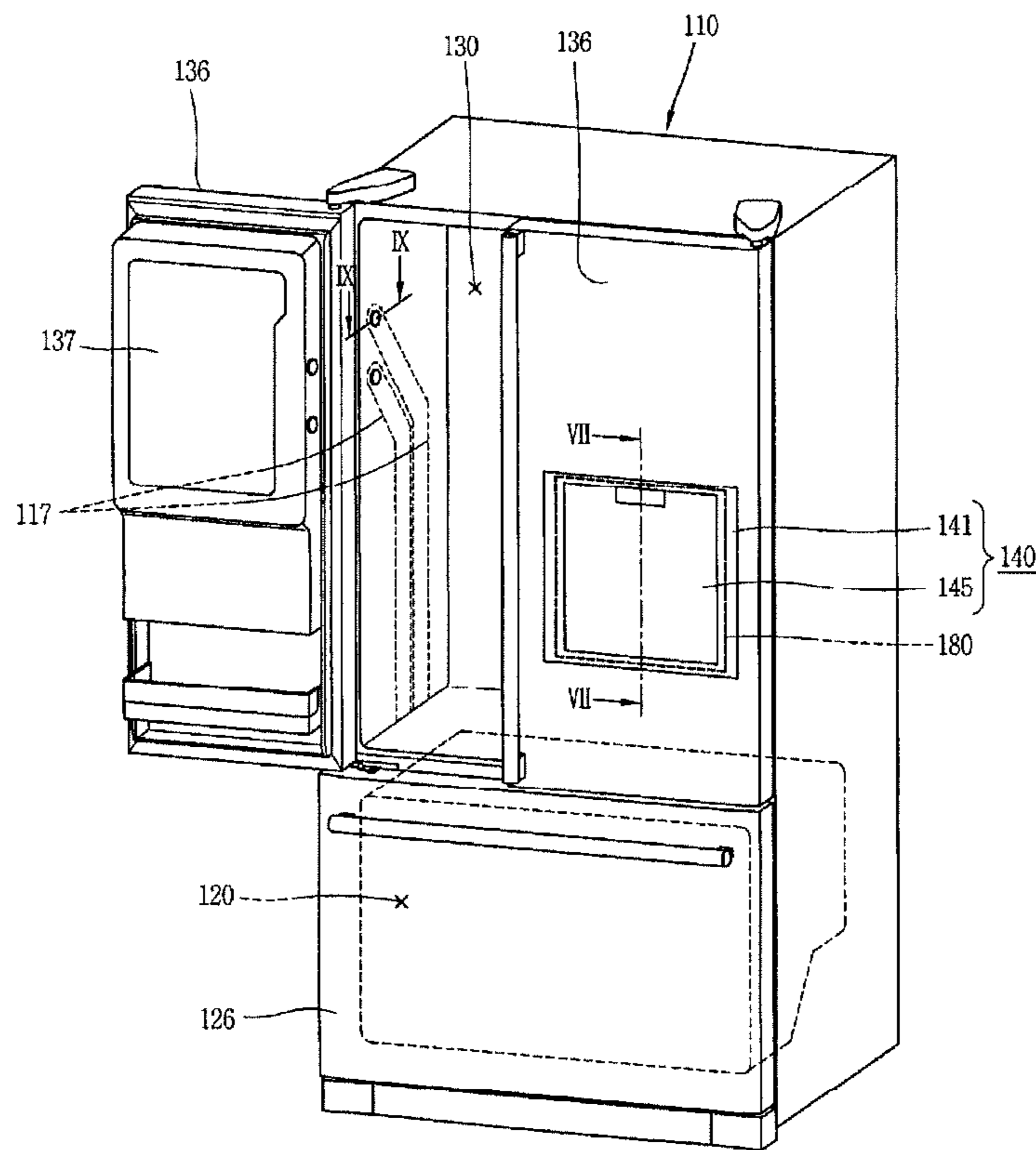


FIG. 7

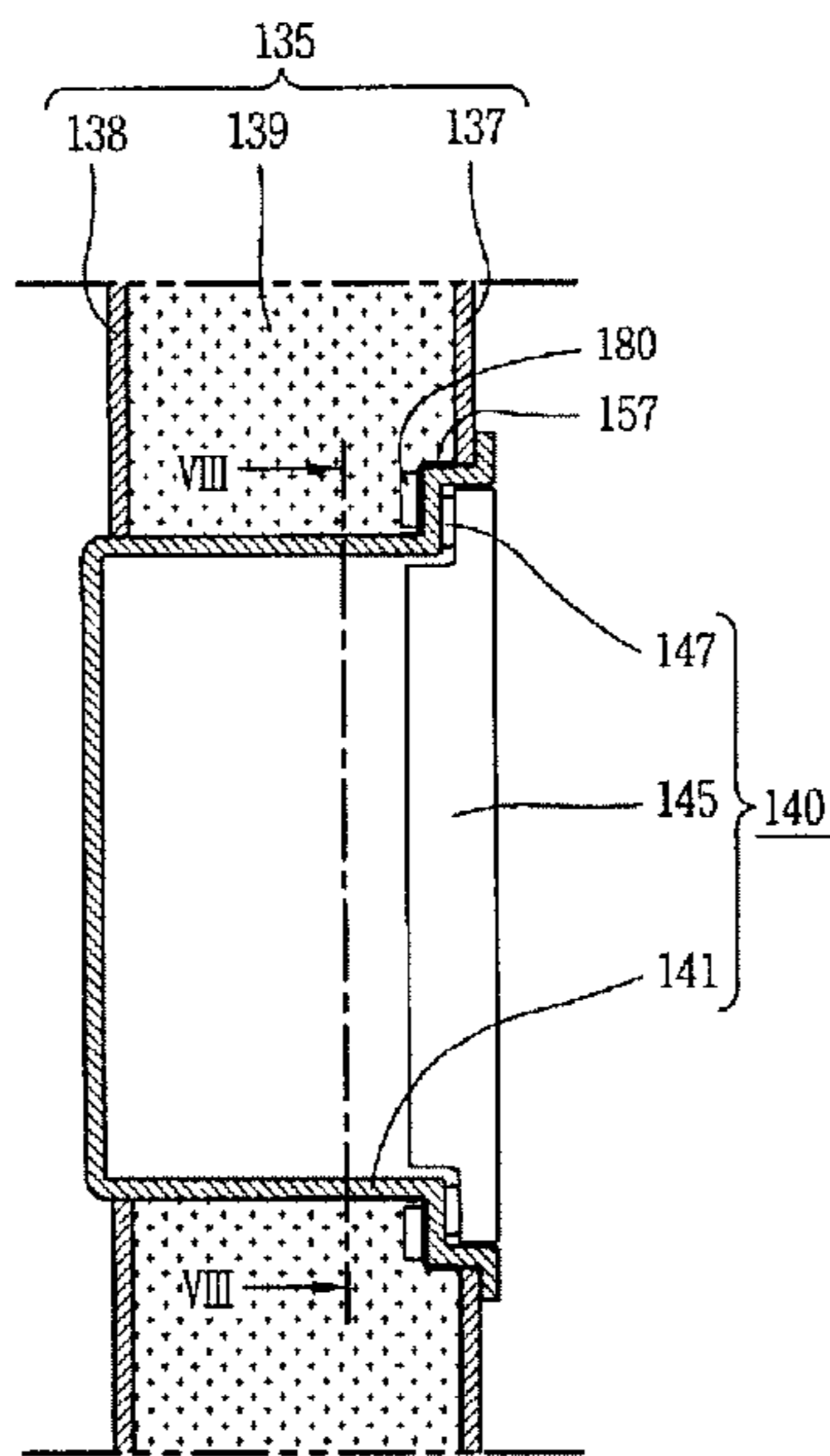


FIG. 8

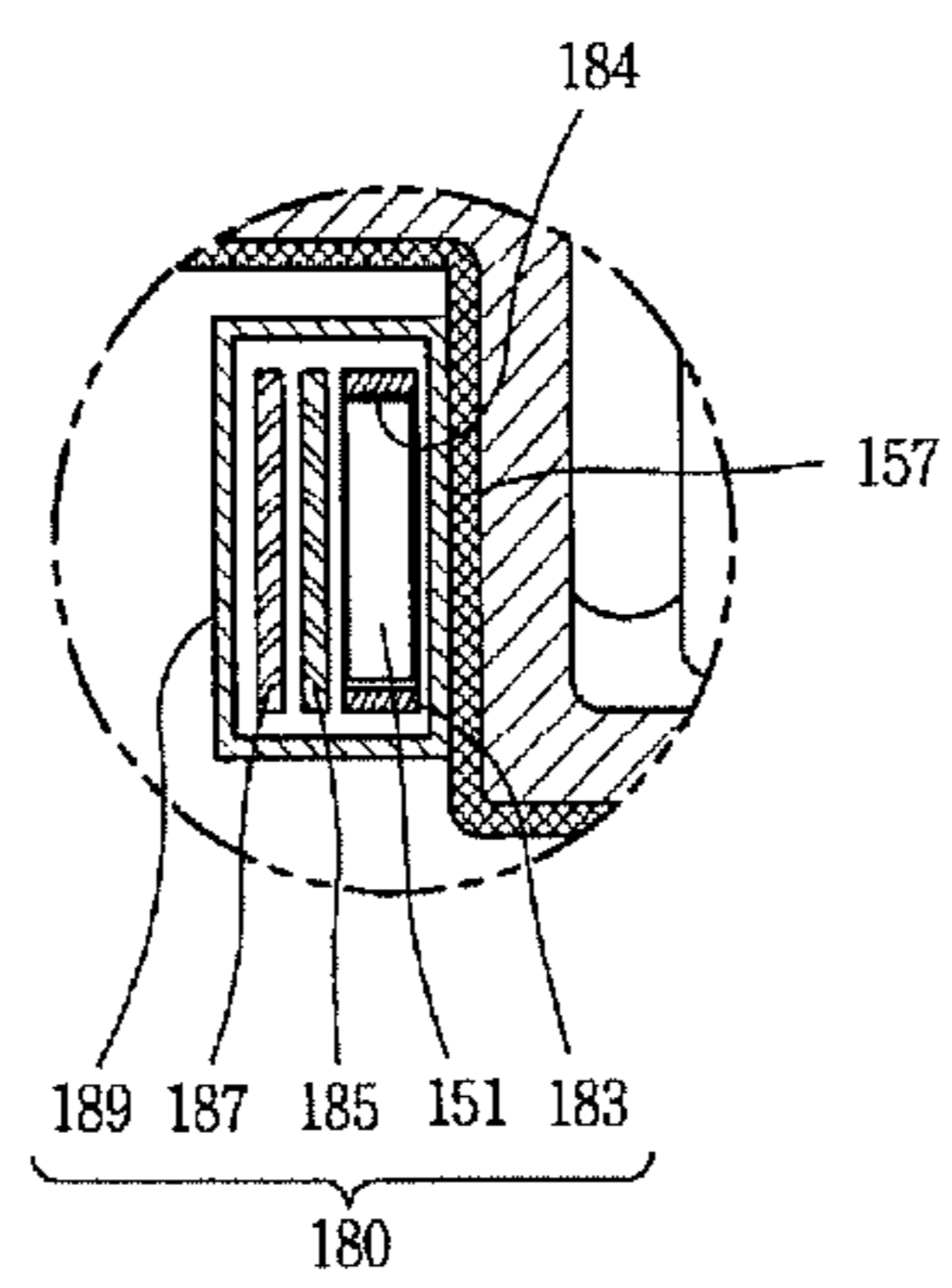
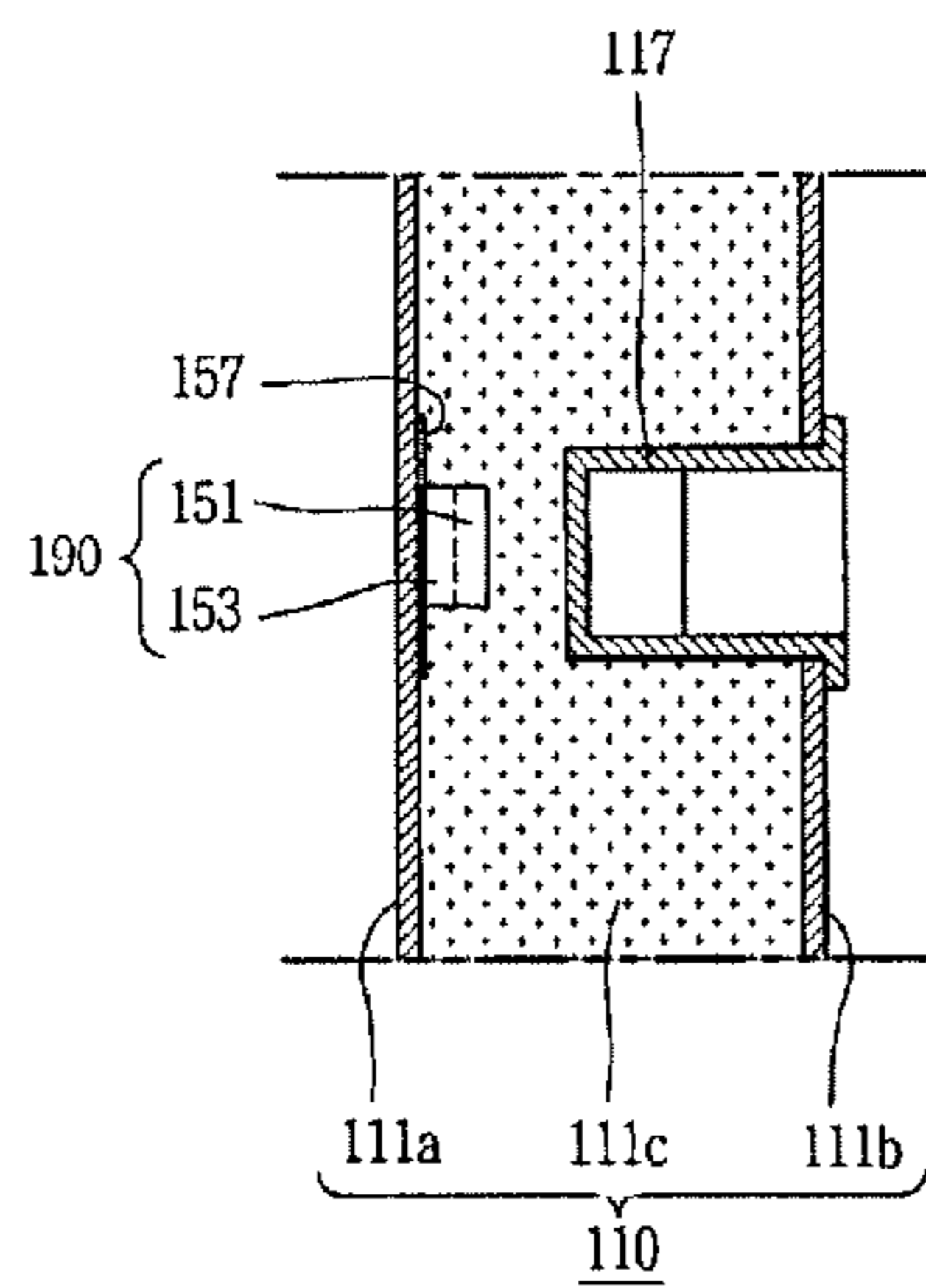


FIG. 9



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REFRIGERATOR HAVING A VARIABLE CAPACITY HEATER

CROSS-REFERENCE TO RELATED APPLICATIONS

The present application claims the benefit of priority to Korean Application No. 10-2009-0007748, filed on Jan. 30, 2009, the contents of which is incorporated by reference herein in its entirety.

FIELD

The present disclosure relates to a refrigerator.

BACKGROUND

A refrigerator is a device for keeping groceries (e.g., foods) in a fresh or frozen state. Such refrigerator includes a refrigerator main body having a cooling chamber therein, doors for opening and closing the cooling chamber and a refrigerating cycle device for providing cool air into the cooling chamber.

The refrigerating cycle device includes a compressor for compressing a refrigerant, a condenser for condensing a refrigerant by emitting heat, an expansion apparatus for depressurizing and expanding the refrigerant, and an evaporator for evaporating the refrigerant by making the refrigerant absorb peripheral latent heat.

The refrigerator may have a variety of functions for enhancing user's convenience and satisfaction.

As an example, the refrigerator may have an ice making system or apparatus for making and providing ice cubes.

The ice making system may include an ice maker for making ice cubes, and an ice bank located below the ice maker for storing the ice cubes made by the ice maker.

The ice maker may be positioned inside the door or inside a freezing chamber. Also, an ice making chamber for accommodating the ice maker may be positioned in the door or in the freezing chamber.

A dispenser for exhausting ice and/or water without opening the door may be positioned at the door of the refrigerator.

Also, a home bar for allowing a user to take foods out of the refrigerator without opening the door may be mounted at the door of the refrigerator.

The home bar may have a home bar case coupled to the door and forming an accommodation space having a front surface open, and a home bar door for opening and closing the front opening of the home bar case.

The refrigerator may cause so-called dew condensation that a surface of the refrigerator main body and/or door is cooled by cool air and droplets are condensed on the cooled surface.

The refrigerator employs an electric heater for reducing the dew condensation, causing an increase in power consumption.

SUMMARY

A refrigerator includes a main body having a cooling chamber. The refrigerator also includes a door coupled to the main body and configured to open and close the cooling chamber. The refrigerator further includes a home bar positioned at a front surface of the door and configured to provide access to contents of the refrigerator without opening the door. In addition, the refrigerator includes a heater positioned at the home bar, and configured to adjust an amount of heat based on an ambient temperature.

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Implementations may include one or more of the following features. For example, the heater comprises a positive temperature coefficient (PTC) device. The home bar comprises a case having an accommodating space and a home bar door configured to open and close the front opening of the home bar. The heater further includes a heat generator connected to the PTC device. The heat generator is configured to generate heat regardless of the ambient temperature.

In some implementations, the heater further includes a heat conduction unit configured to contact with the PTC device. The heater comprises a variable capacity heater. The heater is configured to determine if the ambient temperature rises, the amount of the heat being decreased when the ambient temperature rises. The home bar comprises a refrigerating chamber home bar and a freeze chamber home bar.

In another aspect a refrigerator includes a main body having a cooling chamber. The refrigerator also includes a door coupled to the main body, positioned at a front surface of the refrigerator and configured to open and close the cooling chamber. The refrigerator further includes a home bar positioned at the door and configured to provide access to contents of the refrigerator without opening the door. In addition, the refrigerator includes a heater having at least one heat generator, positioned at the home bar and configured to generate heat based on an ambient temperature.

In yet another aspect, a refrigerator includes a main body having an outer case that is configured to define an outer appearance and an inner case that is positioned inside of the outer case. The refrigerator also includes a cool air passage positioned between the outer case and the inner case configured to establish a defined and restricted air flow that extends at least partially between a freeze chamber and an ice making chamber. The refrigerator further includes a heater positioned between the outer case and an outer surface of the cool air passage and configured to detect an ambient temperature and generate heat variably depending on the ambient temperature.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of a refrigerator having a heater;

FIG. 2 is a cross-sectional view of FIG. 1;

FIG. 3 is a cross-sectional view of FIG. 2;

FIG. 4 is a cross-sectional view of FIG. 1;

FIG. 5 is a cross-sectional of FIG. 4;

FIG. 6 is a perspective view of a refrigerator having a heater;

FIG. 7 is a cross-sectional view of FIG. 6;

FIG. 8 is an enlarged sectional view of a heater area of FIG. 7; and

FIG. 9 is an enlarged sectional view of FIG. 6.

DETAILED DESCRIPTION

As shown in FIG. 1, a refrigerator may include a refrigerator main body **110** having a cooling chamber therein, a door **135** or **125** for opening and closing the cooling chamber, and a heater **150** or **170** positioned in at least one of the refrigerator main body **110** and the door, for generating a different amount of heat depending on an ambient temperature.

The cooling chamber may have both freezing chamber and refrigerating chamber. Alternatively, the refrigerator main body **110** may have one of the freezing chamber and the refrigerating chamber. Hereinafter, an implementation will be described under a situation that the refrigerator main body **110** has a freezing chamber **120** and a refrigerating chamber

130 horizontally positioned with a barrier **115** interposed there between will be described.

The freezing chamber **120** and the refrigerating chamber **130** having a barrier **115** interposed there between in a vertical direction may be positioned inside of the refrigerator main body **110**. A freezing chamber door **125** for opening and closing the freezing chamber **120** may be positioned at a front surface of the freezing chamber **120**, and a refrigerating chamber door **135** for opening and closing the refrigerating chamber **130** may be positioned at a front surface of the refrigerating chamber **130**.

The refrigerating chamber door **135** may have a refrigerating chamber home bar **140** for taking out and/or keeping foods without opening the refrigerating chamber **130**.

Referring to FIG. 2, each of the refrigerating chamber door **135** and the freezing chamber door **125** may include an outer plate **137** defining an outer appearance, an inner plate **138** positioned inside of the outer plate **137** with being spaced apart from each other, and an insulating material **139** filled in a space between the outer plate **137** and the inner plate **138**. A through section through which the inside of the refrigerating chamber door **135** and the outside thereof communicate with each other for configuring the refrigerating chamber home bar **140** may be positioned at a central area of the refrigerating chamber door **135**.

The refrigerating chamber home bar **140** may include a case **141** having an accommodation space therein, and a home bar door **145** positioned at the front surface of the case **141** for opening and closing the front opening of the case **141**. A body of the case **141** may have a shape of approximately rectangular box. A flange **143** protruded outwardly and extending in a peripheral direction may be defined at the front surface of the case **141**. The flange **143** may be configured to be exposed to the front surface of the refrigerating chamber door **135**.

A home bar door accommodation portion **144** for accommodating the home bar door **145** may be positioned at the front surface region of the case **141**. The home bar door **145** may have a rectangular shape and be configured such that its four edges are accommodated in the home bar door accommodation portion **144**. The home bar door **145** may be rotatable with respect to the case **141**. Hinge portions (not shown) for allowing the vertical rotation of the home bar door **145** may be positioned at both sides of a lower end of the home bar door **145**. A home bar gasket **147** for firmly blocking the inside of the home bar **140** from the outside thereof may be positioned at an inter-contact section between the case **141** and the home bar door **145**.

Further, the heater may be positioned in the home bar **140**. The heater **150** has variable capacities such that an amount of heat is determined based on an ambient temperature.

For example, the variable capacity heater **150** of the refrigerating chamber door **140** (hereinafter, referred to as 'variable capacity heater **150**') may be configured to generate a small amount of heat when the ambient temperature of the home bar **140** is relatively high. Also, the heater **150** may generate a large amount of heat when the ambient temperature is relatively low. The ambient temperature may be determined based on compared an ambient temperature with a reference temperature

As an example, as shown FIG. 3, the variable capacity heater **150** may have a positive temperature coefficient (PTC) device **151**. The PTC device **151** is barium titanate based ceramic, which is a type of semiconductor device in which an electric resistance is increased when a temperature is risen. Hence, upon an ambient temperature being risen, the electric resistance is increased, and a amount of heat is decreased. Therefore, an amount of the heat is adjusted based

on detecting change of the temperature. Here, the variable capacity heater **150** may have a plurality of PTC devices **151** as a heat generator or heat emitter.

Alternatively, the variable capacity heater **150** may further include a heat generator **153** made of a typical heating material (e.g., nicrome wire) which generates heat (resistance) regardless of the ambient temperature. In this case, is the number of the PTC devices **151** requiring relatively high cost can be reduced, so as to implement the variable capacity heater **150** with relatively low cost.

As an example, the PTC device **151** and the heat generator **153** may be serially connected. Thus, if the resistance of the PTC device **151** is increased as an ambient temperature is risen, an amount of current flowing over the PTC device **151** and the heat generator **153** is decreased. Accordingly, power consumption may be reduced.

A heat conduction unit **157** contacts with the PTC device **151** and the heat generator **153** may be positioned at the case **141**. The heat conduction unit **157** allows heat to be transferred from the PTC device **151** and the heat generator **153** to the case **141**. A surface temperature of the case **141** may be maintained. As some examples, the heat conduction unit **157** may be configured to have an adhesive layer (material). The heat conduction unit **157** may be configured to have an aluminum tape (sheet or film), so it can be attached to the case **141**.

Further, the heat conduction unit **157** may be positioned at a region where the dew condensation on the case **141** occurs. Hence, the installation of the variable capacity heater **150** can be more facilitated without employing a heat generator (heat emitter) at the region where the dew condensation occurs.

Also, heat of the variable capacity heater **150** can be transferred to the case **141** via the heat conduction unit **157**, in spite of a curved section of the front surface portion of the case **141**, to thereby maintain a uniform temperature at the surface of the case **141**.

In addition, the freezing chamber door **125** may have a freezing chamber home bar **160** allowing a user to take ice, foods, or the like out of the home bar **160** without opening the freezing chamber **120**. The freezing chamber home bar **160** may include a case **161** having an accommodation space therein, and a home bar door **165** positioned at a front surface of the case **161** for opening and closing the front opening of the case **161**. The case **161** may be defined in a rectangular shape. A home bar door accommodation portion **164** for accommodating the home bar door **165** may be positioned at a front surface area of the case **161**. The home bar door **165** may be rotated in a vertical direction by a hinge positioned at a lower end thereof. A home bar gasket for blocking the inside of the home bar **160** from the outside thereof may be positioned at an inter-contact section between the case **161** and the home bar door **165**.

A variable capacity heater **170** of which heat adjustment depends on an ambient temperature may be positioned in the freezing chamber home bar **160**. Hence, dew condensation that moisture in the air is condensed in the freezing chamber home bar **160** can be reduced.

The variable capacity heater **170** of the freezing chamber home bar **160** may have a PTC device **151**. Here, the PTC device **151** may be configured, by considering the ambient temperature based on an installation environment of the refrigerator main body, to make an electric resistance increase at a temperature around an ambient temperature, thereby allowing a small conductive current to flow or a current to rarely flow.

The variable capacity heater **170** may have the heat generator (or heat generation unit) **153** serially connected to the

PTC device **151**. Here, the heat generator **153** may be made of a heating material (e.g., nicrome wire) which generates heat (resistance) regardless of an ambient temperature. Accordingly, the number of PTC devices **151** can be reduced and the heat generation of each of the PTC device **151** and the heat generator **153** may be adjusted based on the ambient temperature.

Alternatively, the variable capacity heater **170** may further have a additional heat generator **175** connected in parallel to the PTC device **151** and made of a heating material (e.g., nicrome wire) which generates heat (resistance) regardless of an ambient temperature. Accordingly, the volume of the PTC device **151** can be further decreased, to reduce the fabricating cost of the variable capacity heater **170**.

The case **161** of the freezing chamber home bar **160** may have a heat conduction unit **157** which contacts with the variable capacity heater **170**. Thus, heat can be transferred from the variable capacity heater **170** to the case **161** and also the surface temperature of the case **161** can be maintained.

Hereinafter, the operation effects of the variable heaters **150** and **170** positioned in the refrigerating chamber home bar **140** and the freezing chamber home bar **160**, respectively, will be described.

With the configuration of the variable capacity heater **150** of the refrigerating chamber home bar **140**, in the state of the home bar door **145** being closed, if the ambient temperature is risen, the resistance of the PTC device **151** is increased. A small current then flows over the PTC device **151** and the heat generator **153**. Accordingly the heat generation of the variable capacity heater **150** of the refrigerating chamber home bar **140** is decreased. Power consumed by the variable capacity heater **150** of the refrigerating chamber home bar **140** is reduced.

When the home bar door **145** of the refrigerating chamber home bar **140** is open, the surface temperature of the case **141** is dropped due to contact with internal cool air. Here, since less electric resistance is generated by the PTC device **151** and thereby the amount of current flowing over the PTC device **151** and the heat generator **153** is increased, the heat generation in the PTC device **151** and the heat generator **153** is increased. Accordingly, the surface temperature of the case **141** is risen to reduce moisture in the air from being condensed on the surface of the case **141**. The heat conduction unit **157** can transfer heat from the variable capacity heater **150** to the case **141** and also allows the surface temperature of the case **141** to be maintained.

Further, with the configuration of the variable capacity heater **170** of the freezing chamber home bar **160**, in the state of the home bar door **165** being closed, if the ambient temperature is risen, the electric resistance of the PTC device **151** is increased. The variable capacity heater **170** of the freezing chamber home bar **160** makes current rarely flow or delicately flow over the PTC device **151** and the first heater **153**, and allows the additional heat generator **175** to generate heat. Here, the heat of the additional heat generator **175** is diffused (conducted) around the case **161** by the heat conduction unit **157**, thereby enabling the surface temperature of the case **161** to be maintained.

If the home bar door **165** is open and thus the ambient temperature is lowered due to interior cool air in the variable capacity heater **170** of the freezing chamber home bar **160**, since the electric resistance of the PTC device **151** is decreased, the amount of conductive current flowing over each of the PTC device **151** and the heat generator **153** is increased. The heat generation of the variable capacity heater **170** can be increased. Hence, the dew condensation on the surface of the case **161** can be prevented.

Hereinafter, another implementation of the present invention will be described with reference to FIGS. **6** to **9**.

As shown in FIG. **6**, a refrigerator may include a refrigerator main body **110** having a cooling chamber therein, a door for opening and closing the cooling chamber, and a variable capacity heater **180** positioned in at least one of the refrigerator main body **110** and the door, and configured to generate heat variably depending on an ambient temperature. Here, the cooling chamber denotes both freezing chamber and refrigerating chamber. The refrigerator main body **110** may have one of the freezing chamber **120** and the refrigerating chamber. Hereinafter, an implementation in which the refrigerator main body **110** has a configuration with a refrigerating chamber positioned at an upper region and a freezing chamber positioned at a lower region will be described.

A refrigerating chamber **130** is positioned at the upper region of the refrigerator main body **110**, and the freezing chamber **120** is positioned at the lower region of the refrigerator main body **110**. A pair of refrigerating chamber doors **136** for opening and closing the refrigerating chamber **130** may be positioned at the front surface of the refrigerating chamber **130**. The refrigerating chamber doors **136** may be coupled to the refrigerator main body **110**. The freezing chamber **120** may have a freezing chamber door **126** implemented as a to type of drawer for opening and closing the freezing chamber **120** with being slid in a back-and-forth direction of the refrigerator main body **110**.

One of the refrigerating chamber doors **136** may have a home bar **140**. The home bar **140** may include a case **141** having an accommodation space therein, and a home bar door **145** positioned at a front surface of the case **141** for opening and closing an opening of the front surface of the case **141**. A home bar gasket **147** may be positioned between the case **141** and the home bar door **145**.

A variable capacity heater **180** of which heat generation depends on an ambient temperature may be positioned in the home bar **140**. The variable capacity heater **180** may have a plurality of PTC devices **151**.

The variable capacity heater **180**, as shown in FIG. **8**, may include a plurality of PTC devices **151**, a frame **183** in which the PTC devices **151** are accommodated and coupled, a terminal unit **185** for supplying power to the PTC devices **151**, an insulating unit **187** for insulating the terminal unit **185**, and a load unit **189** implemented as a heat conductor for transferring heat of the PTC devices **151**.

The load unit **189** may be defined in a shape of a rectangular tube. The frame **183** may have a length longer than that of the PTC device **151**. A plurality of accommodation portions **184** for accommodating the PTC devices **151** may be positioned at the frame **183**. The frame **183**, the PTC devices **151**, the terminal unit **185** and the insulating unit **187** may be accommodated in the load unit **189**.

With such configuration, when power is applied to the PTC devices **151** via the terminal unit **185**, the PTC devices **151** generate heat, and the generated to heat is transferred to the exterior via the load unit **189**.

Further, an ice making chamber **137** in which ice is made may be positioned at another one of the refrigerating chamber doors **136**. A side wall cool air passage **117** for providing cool air into the ice making chamber **137** may be positioned in one side wall of the refrigerating chamber **130**.

The side wall cool air passage **117** may communicate with the freezing chamber **120**. The side wall cool air passage **117** may be configured in pair. Cool air of the freezing chamber **120** flows into the ice making chamber **137** via one of the side wall cool air passages **117** and the cool air flowed through the

ice making chamber **137** flows back into the freezing chamber **120** via another one of the side wall cool air passages **117**.

The refrigerator main body **110**, as shown in FIG. **9**, may include an outer case **111a** forming an outer appearance, an inner case **111b** positioned inside the outer case **111a** with being spaced from each other, and an insulating material (foaming agent) **111c** filled (foamed) for insulation in a space between the outer case **111a** and the inner case **111b**.

The side wall cool air passage **117** may be positioned between the outer case **111a** and the inner case **111b**, and the insulating material **111c** may cover the periphery of the side wall cool air passage **117**.

A variable capacity heater **190** may be positioned at an outer side of the side wall cool air passage **117**, and configured to reduce the dew condensation on the outer surface of the refrigerator main body **110** and also configured to generate or adjust heat variably depending on an ambient temperature. Accordingly, the dew condensation, which occurs on the surface of the outer case **111a** upon being cooled by the side wall cool air passage **117**, can be reduced.

The variable capacity heater **190** may have the plurality of PTC devices **151**. The variable capacity heater **190** may further have a heat generator **153** made of a heating material which generates heat (resistance) regardless of an ambient temperature.

The variable capacity heater **190** may be positioned inside the outer case **111a**, such that it can reduce droplets from being defined on the surface of the refrigerator main body **110** without spoiling the outer appearance of the refrigerator main body **110**.

A heat conduction unit **157** may further be positioned at an inner surface of the outer case **111a**, such that heat can be transferred from the variable capacity heater **190** to the surface of the outer case **111a**. The surface temperature of the outer case **111a** can be maintained.

Hereinafter, the operation effects of the variable capacity heaters **180** and **190** positioned in the home bar **140** and the refrigerator main body **110**, respectively, will be described.

In a state of the home bar door **145** of the refrigerating chamber door **136** being closed, if the ambient temperature of the home bar **140** is risen, the electric resistance of the PTC devices **151** is increased and thus less conductive current flows in the variable capacity heater **180** of the home bar **140**. Accordingly, the heat generation of the variable capacity heater **180** is decreased and power consumption is reduced.

When the home bar door **145** is open and thereby the surface temperature of the case **141** of the home bar **140** is lowered due to interior cool air, the electric resistance of the PTC devices **151** is decreased. More conductive current then flows in the PTC devices **151**, so the heat generation of the variable heater **180** is increased. As a result, the surface temperature of the case **141** is risen to reduce the dew condensation on the surface of the case **141**.

Further, if the operation of the ice making chamber **137** is stopped, for example, if the surface temperature of the outer case **111a** outside the side wall cool air passage **117** is risen, the electric resistance of the PTC devices **151** is increased, and thus less conductive current flows over the PTC devices **151** and the heater **153**. As a result, the dew condensation can be reduced.

If the operation of the ice making chamber **137** is started and cool air then flows into the side wall cool air passages **117**, the ambient temperature of the PTC devices **151** of the variable capacity heater **190** of the refrigerator main body **110** is lowered, which decreases the electric resistance of the PTC devices **151**. Accordingly, a large conductive current flows over the PTC devices **151** and the heat generator **153** and thus

the heat generation of the variable capacity heater **190** is increased. Thus, the surface temperature of the outer case **111a** is risen, thereby reducing the dew condensation due to the cooling of the surface of the outer case **111a**.

The implementation described with reference to FIGS. **6** to **9** exemplarily shows a variable capacity heater is configured by positioning a plurality of PTC devices at a periphery of a home bar. The implementation as described with reference to FIGS. **1** to **5** that a variable capacity heater is positioned at a home bar or a refrigerator main body may be applicable.

It will be understood that various modifications may be made without departing from the spirit and scope of the claims. For example, advantageous to results still could be achieved if steps of the disclosed techniques were performed in a different order and/or if components in the disclosed systems were combined in a different manner and/or replaced or supplemented by other components. Accordingly, other implementations are within the scope of the following claims.

What is claimed is:

1. A refrigerator having a heater, comprising:

a main body having a cooling chamber;
a door coupled to the main body and configured to open and close the cooling chamber;

a home bar positioned at a front surface of the door and configured to enable access to contents of the refrigerator without opening the door; and

a heater positioned at the home bar, and configured to adjust an amount of heat based on an ambient temperature,

wherein the home bar comprises:

a case having an accommodating space;

a home bar door configured to open and close a front opening of the home bar;

and

a home bar door gasket disposed at a contact section between the case and the home bar door,

wherein the case defines a home bar door accommodating portion at a front opening of the case, the home bar door accommodating portion accommodating the home bar door when the home bar door is in a closed position,

wherein the home bar door gasket contacts an outer surface of the home bar door accommodation portion,

wherein the heater comprises a positive temperature coefficient (PTC) device, and a heat generator connected to the PTC device, the heat generator having a first heat generator connected to the PTC device in series and a second heat generator connected in parallel with the PTC device,

wherein the heater further comprises a heat conduction unit configured to contact the PTC device, the heat conduction unit being positioned at an inner surface of the home bar door accommodating portion of the case to allow heat of the PTC device to be transferred to the case so as to maintain a temperature of a portion of the case contacting the heat conduction unit,

wherein the first and second heat generators are disposed on the heat conduction unit and spaced from each other, wherein the first heat generator and the second heat generator both surround the accommodating space defined by the case of the home bar, and

wherein the second heat generator is positioned inside of the first heat generator and located closer to the accommodating space than the first heat generator.

2. The refrigerator of claim **1**, wherein the heat generator is configured to generate heat regardless of the ambient temperature.

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3. The refrigerator of claim 1, wherein the heater is configured to determine if the ambient temperature rises, the amount of the heat being decreased when the ambient temperature rises.

4. The refrigerator of claim 1, wherein the home bar comprises a refrigerating chamber home bar and a freeze chamber home bar.

5. A refrigerator having a heater, comprising:

a main body having a cooling chamber;

a door coupled to the main body, positioned at a front surface of the refrigerator and configured to open and close the cooling chamber;

a home bar positioned at the door and configured to enable access to contents of the refrigerator without opening the door; and

a heater having at least one heat generator, positioned at the home bar and configured to generate heat based on an ambient temperature,

wherein the home bar comprises:

a case having an accommodating space; and

a home bar door configured to open and close a front opening of the home bar; and

a home bar door gasket disposed at a contact section between the case and the home bar door,

wherein the case defines a home bar door accommodating portion at a front opening of the case, the home bar door accommodating portion accommodating the home bar door when the home bar door is in a closed position,

wherein the home bar door gasket contacts an outer surface of the home bar door accommodation portion,

wherein the heater comprises a positive temperature coefficient (PTC) device,

wherein the at least one heat generator comprises a first heat generator connected to the PTC device in series and a second heat generator connected in parallel with the PTC device,

wherein the heater further comprises a heat conduction unit configured to contact with the PTC device, the heat conduction unit being positioned at an inner surface of the home bar door accommodating portion of the case to allow heat of the PTC device to be transferred to the case so as to maintain a temperature of a portion of the case contacting the heat conduction unit,

wherein the first and second heat generators are disposed on the heat conduction unit and spaced from each other,

wherein the first heat generator and the second heat generator both surround the accommodating space defined by the case of the home bar, and

wherein the second heat generator is positioned inside of the first heat generator and located closer to the accommodating space than the first heat generator.

6. The refrigerator of claim 5, wherein the home bar comprises a refrigerating chamber home bar and a freeze chamber home bar.

7. A refrigerator having a heater, comprising:

a main body having an outer case that is configured to define an outer appearance and an inner case that is positioned inside of the outer case, the main body comprising a freezing chamber disposed at a lower portion of the main body and a refrigerating chamber disposed at an upper portion of the main body;

a refrigerating chamber door configured to open and close the refrigerating chamber;

an ice chamber located at the refrigerating chamber door and configured to store ice;

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a cool air passage positioned between the outer case and the inner case configured to establish a defined and restricted air flow that extends at least partially between the freezing chamber and the ice chamber; and

a heater positioned between the outer case and an outer surface of the cool air passage and configured to detect an ambient temperature and generate heat variably depending on the detected ambient temperature,

wherein the heater comprises a positive temperature coefficient (PTC) device, and a heat generator connected to the PTC device, the heat generator having a first heat generator connected to the PTC device in series and a second heat generator connected in parallel with the PTC device,

wherein the heater further comprises a heat conduction unit configured to contact with the PTC device, the heat conduction unit being positioned at an inner surface of the outer case to allow heat of the PTC device to transfer to the outer case so as to maintain a temperature of a portion of the outer case contacting the heat conduction unit,

wherein the first and second heat generators are disposed on the heat conduction unit and spaced from each other, wherein the first heat generator and the second heat generator both surround the accommodating space defined by the case of the home bar, and

wherein the second heat generator is positioned inside of the first heat generator and located closer to the accommodating space than the first heat generator.

8. The refrigerator of claim 7, wherein further comprises an insulating material positioned between the outer case and inner case.

9. The refrigerator of claim 1, wherein the first heat generator is a nicrome wire and the second heat generator is a nicrome wire.

10. The refrigerator of claim 1, wherein the first heat generator follows a path that is parallel to a path followed by the second heat generator.

11. The refrigerator of claim 1, wherein a spacing between the first heat generator and the second heat generator is maintained as the first heat generator and the second heat generator surround the accommodating space defined by the case of the home bar.

12. The refrigerator of claim 5, wherein the first heat generator is a nicrome wire and the second heat generator is a nicrome wire.

13. The refrigerator of claim 5, wherein the first heat generator follows a path that is parallel to a path followed by the second heat generator.

14. The refrigerator of claim 5, wherein a spacing between the first heat generator and the second heat generator is maintained as the first heat generator and the second heat generator surround the accommodating space defined by the case of the home bar.

15. The refrigerator of claim 7, wherein the first heat generator follows a path that is parallel to a path followed by the second heat generator.

16. The refrigerator of claim 7, wherein the first heat generator and the second heat generator both surround the accommodating space defined by the case of the home bar.

17. The refrigerator of claim 7, wherein a spacing between the first heat generator and the second heat generator is maintained as the first heat generator and the second heat generator surround the accommodating space defined by the case of the home bar.